APPLN. No. 09/751,289

AMDT. DATED JANUARY 10, 2005

REPLY TO OFFICE ACTION OF OCTOBER 21, 2004

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) A method for delivering content over a network having at least one requesting endpoint and at least one node, wherein the content further comprises a descriptor that enables the at least one node to identify an attribute of the content and wherein the at least one node stores content, the method comprising:

launching a request for content from the at least one requesting end point, the step of launching a request further comprising:

launching the request with a request payload containing one or more instructions on what to locate in the descriptor;

propagating the request over the network to the at least one node;

leaving a trail of the request at the at least one node; and, when content matching the request is located,

returning a copy of the content to the at least one requesting endpoint over the trail of the request.

2. (Original) The method of claim 1, wherein the network comprises at least one other endpoint and the method further comprises:

propagating the request over the network to the at least one other endpoint; and

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leaving a trail of the request at the at least one other endpoint.

- 3. (Cancelled)
- 4. (Currently Amended) The method of claim <u>1</u> 3, further comprising:
 - launching the request with a persistence indicator that indicates a duration for which the request is to be preserved at the at least one node.
- 5. (Original) The method of claim 4, wherein the step of leaving a trail of the request further comprises:
 - storing the request at the at least one node for a duration given by the persistence indicator.
- 6. (Currently Amended) The method of claim 1 3, wherein the at least one node further comprises a receiver for receiving the request and identifying an adjacent node from which the request is received, and the method further comprises:
 - comparing the request payload to the descriptor of the content stored at the at least one node; and when the request payload matches the descriptor,

forwarding the content with the matching descriptor to the adjacent node.

- 7. (Currently Amended) A system for delivering content over a network having at least one requesting endpoint and at least one node, wherein the content further comprises a descriptor that enables the at least one node to identify an attribute of the content and wherein the at least one node stores content, the system comprising:
 - a request launcher for launching a request for content from the at least one requesting end point, the request launcher further comprises:

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<u>a launch module for launching the request with a request payload</u>

<u>containing one or more instructions on what to locate in the</u>

<u>descriptor;</u>

- a propagator for propagating the request over the network to the at least one node;
- a request trailer for leaving a trail of the request at the at least one node; and, when content matching the request is located,
- a content forwarder for returning a copy of the content to the at least one requesting endpoint over the trail of the request.
- 8. (Cancelled)
- 9. (Currently Amended) The system of claim <u>7</u>8, further comprising:
 - a persistence indicator that indicates a duration for which the request is to be preserved at the at least one node.
- 10. (Original) The system of claim 9, wherein the request trailer further comprises:
 - a storage module to enable storing the request at the at least one node for a duration given by the persistence indicator.
- 11. (Currently Amended) The system of claim 7 8, wherein the at least one node further comprises a receiver for receiving the request and identifying an adjacent node from which it was received, and the system further comprises:
 - a comparator for comparing the request payload to the descriptor of the content stored at the at least one node; and

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a forwarder for forwarding, when the request payload matches the descriptor, the content with the matching descriptor to the adjacent node.

12. (Currently Amended) An article of manufacture for delivering content over a network having at least one requesting endpoint and at least one node, wherein the content further comprises a descriptor that enables the at least one node to identify an attribute of the content and wherein the at least one node stores content, the article of manufacture comprising:

at least one processor readable carrier; and

instructions carried on the at least one carrier;

wherein the instructions are configured to be readable from the at least one carrier by at least one processor and thereby cause the at least one processor to operate so as to:

launch a request for content from the at least one requesting end point <u>the</u> launch further comprising:

launching the request with a request payload containing one or more instructions on what to locate in the descriptor;

propagate the request over the network to the at least one node;

leave a trail of the request at the at least one node; and, when content matching the request is located,

return a copy of the content to the at least one requesting endpoint over the trail of the request.

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13. (Currently Amended) A signal embodied in a carrier wave and representing sequences of instructions which, when executed by at least one processor, cause the at least one processor to deliver content over a network having at least one requesting endpoint and at least one node, wherein the content further comprises a descriptor that enables the at least one node to identify an attribute of the content and wherein the at least one node stores content, by performing the steps of:

launching a request for content from the at least one requesting end point, the step of launching a request further comprising:

launching the request with a request payload containing one or more instructions on what to locate in the descriptor;

propagating the request over the network to the at least one node;

leaving a trail of the request at the at least one node; and, when content matching the request is located,

returning a copy of the content to the at least one requesting endpoint over the trail of the request.

14. (Currently Amended) A method for transferring content over a network comprising one or more nodes, wherein the content further comprises a descriptor that enables the one or more nodes to identify an attribute of the content and wherein the one or more nodes are enabled to route messages related to the transfer of content, the method comprising the steps of:

transmitting a content registration message when new content is available at the one or more nodes, wherein the content registration message advertises to the one or more nodes that the new content is available;

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transmitting a request registration message containing one or more

instructions on what to locate in the descriptor when requesting
content from the one or more nodes, wherein the request
registration message advertises to the one or more nodes an
interest in locating a particular attribute of the content as identified
by the descriptor;

transmitting a content deliver message when the particular content requested is located at the one or more nodes; and

transferring the particular content requested or a copy of the particular content requested toward the one or more nodes from which the request registration message was transmitted.

15. (Original) The method of claim 14, wherein the step of transmitting a content registration message further comprises:

propagating the content registration message to the one or more nodes; and

building a routing table entry at the one or more nodes using the content registration message.

16. (Original) The method of claim 14, wherein the step of transmitting a content registration message further comprises:

propagating the request registration message to the one or more nodes; and

building a routing table entry at the one or more nodes using the request registration message.

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17. (Original) The method of claim 14, wherein the step of transmitting a request registration message further comprises:

creating a request registration message trail.

18. (Original) The method of claim 17, wherein the one or more nodes are enabled to store messages and wherein the step of creating a request registration message trail further comprises:

storing a copy of the request registration message at each of the one or more nodes that route the request registration message.

19. (Original) The method of claim 17, wherein the step of transferring the particular content requested or a copy of the particular content requested toward the one or more nodes from which the request registration message was transmitted further comprises:

routing the particular content requested or a copy of the particular content requested along a path marked by the request registration message trail.

- 20. (Cancelled)
- 21. (Original) The method of claim 14, further comprising:

balancing the network load for transferring content by storing copies of content at the one or more nodes.